MEMORANDUM

September 18, 2002

FROM: Thomas M. Ryan, Evaluator

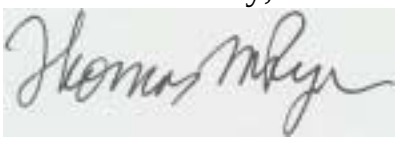
TO: Dr. Joseph Lazor
Dr. Elizabeth Boehm

SUBJECT: Final Report of the Evaluation of the
Mathematics and Science Training Project
in Support of the San Antonio *Better Jobs* Initiative

I am pleased to submit this final report on the Evaluation of the Mathematics and Science Training Project.

The material in the report also includes the data, findings and conclusions, and recommendations that I had previously presented to you in three prior Interim Summary Reports over the last nine months.

Cordially,



Thomas M. Ryan

Report on the Evaluation of San Antonio Better Jobs Initiative Childcare and After School Staff Training in Mathematics and Science

September, 2002

Presenters:
Dr. Elizabeth Boehm,
University of the Incarnate Word (UIW)
Ms. Evelyn Trinidad,
South San Antonio ISD (SSAISD)

Evaluator:
Mr. Thomas M. Ryan, Consultant

Project Director: Dr. Joseph Lazor,
University of Texas at San Antonio (UTSA)

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EXECUTIVE SUMMARY

The San Antonio Better Jobs Initiative is an economic development-based community-wide effort to improve the quality of life in San Antonio and raise the standard of living. An important feature is developing and supporting a highly skilled and educated workforce.

To support this initiative, Dr. Elizabeth Boehm (now on the faculty at UIW) and Ms. Evelyn Trinidad (from South San Antonio ISD) working with UTSA/SAUSI, developed and implemented staff training workshops covering two key levels of "job readiness." They are: Early Childhood Education and Middle School Education Enrichment. The focus was on the mathematics and science aspects of the Texas Essential Knowledge and Skills (TEKS) and the Texas Assessment of Academic Skills (TAAS). Also, an attempt was made to provide similar training to the Adult Literacy program.

Early Childhood Training

A group of 89 childcare providers and staff members received mathematics (63) and science (26) training at three workshops held during the 2001-2002 Academic Year. They were from the Better Jobs San Antonio Kindergarten Readiness Model sites distributed across the 10 City Council districts. Mathematics training concepts included: *number sense; geometry; algebraic reasoning; measurement; and, probability and statistics*. The science training focused on the process skills of: *comparing; communicating; and, observing.*

Findings and Conclusions

Surveys of the participants during and after the five-day Mathematics Workshops and after the one-day Science Workshop (See Attachments 1 and 2 for the data) indicated that:

- A very high percentage have a good understanding of the mathematics materials, were able to use what they learned at their center, and have changed the way they work with the children.
- A very high percentage also understand the science materials, will be able to use what they learned at their center, and feel they have gained new professional tools to use with children.
- Most are now having more conversations about mathematics and science with both their colleagues and the parents of the children.

- Many indicate that they do not have much interaction with the local elementary school. A low percentage reported meeting with them.
- The majority indicated that the children do not use the computer in their math and science learning. Also, childcare staff do not use the WEB to acquire teaching aids.
- In response to an open-ended question, some of the participants indicated that they would like to receive more training in mathematics and in science.

Recommendations:

- Continue mathematics and science workshops for childcare staff. An abundance of participant comments supports the need for this type of additional training. (See Attachments 1C and 2B)
- Consider setting up a system to periodically update professional development materials for those previously attending the workshops.
- Consider sponsoring periodic meetings to improve coordination between day care centers and the local elementary schools around common areas of concern. (e.g. alignment with TEKS and TAAS)
- Examine the issue of technology relative to day care centers (e.g. providing guidance to the day care staff on how to use the computer as a teaching aid).

Middle School Challenge (After School) Training - Middle school is the turning point for youth decisions about high school and college. It is important that after-school staff have a clear understanding of standards-based teaching targeted to the mathematics and science components of TEKS. The training given by UTSA/USI professionals included a one-day workshop to provide tools to After-School Challenge staff for teaching mathematics by using logic and reasoning games. There were also additional presentations to 136 attendees at a Parks and Recreation Department institute.

Findings and Conclusions

An evaluation survey of the sparsely attended mathematics workshop (only five (5) persons attended) indicated that the After-School staff participants:

- Generally, were not aware of the TAAS mathematics and science objectives of their regular campus program. They did not know if the Challenge Program was aligned with those objectives.

- Agreed that they understood the training materials, that they will use them at their schools, and that the students will definitely benefit.

Feedback from the Parks and Recreation Department on the "manipulatives" training session indicated that it will definitely benefit the After-School staff and their students.

Recommendations:

- Consider setting up a mechanism to improve coordination between the After-School Challenge staff and middle school faculty about alignment of their activities with TEKS and their campus mathematics and science programs.

- Provide regular training sessions in mathematics and science for After-School Challenge staff. This type of training could possibly be integrated with mandatory Parks and Recreation in-service training.

Adult Literacy Training – The proposed mathematics and science training for Adult Literacy Center staff did not occur as planned. A scheduled workshop did not succeed in attracting participants. The lack of attendance may indicate that the program did not meet the needs of the Center. Another reason could be that it was not well advertised.

Conclusions and Recommendations:

- It is important to align Adult Education with the K-16 standards-based systemic reform in mathematics and science teaching and learning taking place in San Antonio. Appropriate staff training will facilitate the alignment. This would provide a continuity for those students planning to continue with college studies.
- UTSA/SAUSI/City/Literacy Center representatives should revisit the issue of staff training in rigorous standards-based mathematics and science teaching methods.

Report on the
San Antonio Better Jobs Initiative
Childcare and After School Staff Training
in Mathematics and Science

1. Project Background - The San Antonio Better Jobs Initiative is an economic development based community wide effort to improve the quality of life in San Antonio and raise the standard of living. An important feature is developing and supporting a highly skilled and educated workforce.

The initiative focuses on five core areas to develop the workforce: Early Childhood Education; Education Enrichment; Higher Education Preparation and Opportunities; Job Training; and, Literacy.

To support this initiative, Dr. Elizabeth Boehm (now on the faculty at UIW) and Ms. Evelyn Trinidad (from South San Antonio ISD) working with UTSA/SAUSI, developed and implemented staff training workshops covering two key levels of "job readiness."

They are: Early Childhood Education and Middle School Education Enrichment. The focus was on the mathematics and science aspects of the Texas Essential Knowledge and Skills (TEKS) and the Texas Assessment of Academic Skills (TAAS).

An attempt was made to provide similar training to the Adult Literacy program.

2. Early Childhood Training - The experiences children have between the ages of birth and five years old are crucial to their success in school and, ultimately, in the workplace. Citywide workshops sponsored by the Division of Community Initiatives (DCI) provide parents and children with Family Learning sessions. The family sessions' reading and learning activities correlate with the School Readiness Guidelines, that identify skills that support success in school.

A substantial body of current educational research indicates that childcare providers and kindergarten teachers need to team in visits to exchange ideas on the transition of preschool children from day care centers into public schools and to help improve the learning opportunities in the day care facilities. A successful child is one who learns 'early on.'

a). Problem and Information Needs - Children begin to learn long before they start school. Recognizing this, the San Antonio "Kindergarten Readiness Guidelines" were developed to provide an easy way for family, care givers and childcare workers to identify some of the expectations for children entering Kindergarten. The problem is once they are in school there are two core knowledge areas that are traditionally difficult for them to learn --mathematics and science.

Typically, child daycare owners and staff receive little or no professional development in mathematics and science for early childhood. As a result, there is a weak foundation for mathematics and science in day care centers. Although there could be possibilities for a connection with a local elementary school to obtain the needed professional development, day care centers have traditionally not had much contact with the public school system.

A recent report of the "Kindergarten Readiness Project Research" recommended that a consistent program be applied across all Kindergarten Readiness - Model School sites. This involves curriculum, staff training, parent training, and community awareness.

b). Participants – Eighty nine (89) early childhood educators, from 34 Better Jobs San Antonio Kindergarten Readiness Model sites which are distributed across the 10 City Council districts, participated in professional development activities in the foundations for mathematics and the guiding principles of scientific inquiry.

The training in workshops focused on the Mathematics and Science Texas Essential Knowledge and Skills (TEKS) and featured a multitude of strategies, manipulatives and a range of other materials and documentation. They emphasized a hands-on approach with "get-up-and-move" activities.

c).Objectives - The objectives of the project in these areas were to:

- Improve the capacity of daycare centers to integrate basic mathematics and science concepts into daily activities.
- Improve the capability of daycare owners and staff to get 4- and 5-year old children ready to study mathematics and science in the structured environment of the public school system.

d). Activities - During the 2001-2002 academic year, three Mathematics Workshops (consisting of five 6-hour sessions totaling 30 hours each) were conducted for 63 childcare personnel. A one-day Science Workshop was held for 26 childcare staff members.

The mathematics workshops were based on the TEXTEAMS system of offering professional development through a well-trained network of leaders within a flexible system. This system, developed by the University of Texas – Austin, focuses on the Mathematics and Science Texas Essential Knowledge and Skills (TEKS) and features a multitude of strategies, manipulatives and a range of other materials and documentation. It emphasizes a hands-on approach with "get-up-and-move" activities.

The material is designed to enhance the childcare professional's knowledge and understanding of the five mathematics content strands: *number and operation; patterns and algebraic thinking; geometry and spatial sense; measurement; and, probability and statistics.* The participants received manipulatives together with other materials and documentation.

The instructors used the Full Option Science System (FOSS) materials developed by the University of California Lawrence Hall of Science for teaching basic life science to young children. The science training focused on the process skills of *comparing, communicating and observing.* Participants received materials and documentation.

e). Expected Outcomes - As a result of this training:

- Child care educators understand the higher standards needed to teach children how to learn the basics of mathematics and science.
- There will be more conversations between parents and child care staff regarding mathematics and science.
- Parents' knowledge and understanding of the foundations of mathematics and science will improve. Parents will feel more at ease in helping their children learn in these areas.
- There will be more contacts between childcare staff and elementary school staff.

f). Evaluation Method – The evaluation of the mathematics workshops involved surveying the participants by questionnaire at the beginning, in the

middle and at the end of their training. Questions were designed to:

- Detect any problems in using the materials.
- Ascertain the degree of change in conversations about science and mathematics among the participants, their colleagues, and parents.
- Look at the relationship between daycare centers and local public elementary schools.
- Determine the use of technology.
- Discover whether the participants were able to apply what was learned, and whether they changed the way they worked with children.

The participants at the one-day science workshop were surveyed in the same manner with a similar type of questionnaire.

See Attachments 1 and 2 for survey data.

g). Findings – Surveys of the participants during and after the five day Mathematics Workshops and after the one day Science Workshop indicated that:

- A very high percentage have a good understanding of the mathematics materials, were able to use what they learned at their center, and have changed the way they work with the children.
- A very high percentage also understand the science materials, will be able to use what they learned at their center, and feel they have gained new professional tools to use with children.
- Most are now having more conversations about mathematics and science with both their colleagues and the parents of the children.
- Many indicate that they do not have much interaction with the local elementary school. A low percentage reported meeting with them.
- The majority indicated that the children do not use the computer in their mathematics and science learning. Also, childcare staff do not use the WEB to acquire teaching aids.
- In response to an open-ended question, some of the participants indicated that they would like to receive more training in mathematics and in science.

h). Conclusions and Recommendations -

- Continue mathematics and science workshops for childcare staff. An abundance of participant comments supports the need for this type of additional training. (See Attachments 1C and 2B)
- Consider setting up a system to periodically update professional development materials for those attending the workshops.
- Consider sponsoring periodic meetings to improve coordination between daycare centers and the local elementary schools around common areas of concern. (e.g. alignment with the Texas Essential Knowledge and Skills (TEKS)
- Examine the issue of technology relative to day care centers (e.g. providing guidance to the daycare staff on how to use the computer as a teaching aid).

2. Middle School Challenge (After-School) Training - Once school is dismissed at the end of the day, middle school students who are not supervised by their working parents need a safe haven to do homework, get exercise and receive some nourishment. The public middle school campus is this safe haven. It can provide after-school mathematics programs for students that will increase their likelihood of mastering the Texas Essential Knowledge and Skills (TEKS) and their success with the Texas Assessment of Academic Skills (TAAS).

In the Fall of 2000 the Department of Parks and Recreation started a pilot program (Challenge) to develop a feeder pattern linking middle schools with the model elementary schools involved in the Early Childhood Guidelines.

a). Problem and Information Needs - Since middle school is the turning point for youth decisions about high school and college, it is important that after-school staff have a clear understanding of standards-based teaching targeted to the mathematics and science components of TEKS.

b). Participants – Only five (5) After-School Challenge staff members participated in a one-day workshop and received training in standards-based teaching. The Pentathlon curricula tools were used to draw out mathematics concepts for the attendees..

c). Objectives - The objectives of the project in these areas were to:

- Strengthen and align the after-school teaching of mathematics and science with the academic needs of the campus , i.e., aligned to the TEKS.
- Provide training in standards-based mathematics tools to After-School Challenge staff.

d). Activities - The workshop for After-School Challenge staff focused on learning to use the "Mathematics Pentathlon" program of interactive problem solving games, supporting curricular and instructional activities, and assessment instruments. This program features a highly motivational format that teaches mathematical concepts and skills and fosters active critical thinking and problem solving in children.

The additional presentations on the use of “manipulatives” were given for 136 attendees at a recent Parks and Recreation Department training session.

e). Expected Outcomes –

- After-School Challenge staff understand and are capable of using logic-based manipulatives and activities that are aligned with campus needs.

f). Evaluation Method –

The evaluation of the After-School Challenge mathematics workshop involved surveying the participants by questionnaire . Questions were designed to:

- Detect any problems in using the materials.
- Determine if participants have a good grasp of the TAAS mathematics and science objectives of their regular campus program.
- Determine if they were aware if their After-School Challenge Program was aligned with those objectives.

See Attachment 3A for survey data.

The evaluation of the “manipulatives” training session relied on feedback from the Parks and Recreation Department staff.

g). Findings – The survey of the sparsely attended mathematics workshop (only 5 attended) indicated that the After-School participants:

- Generally were not aware of the TAAS mathematics and science objectives of their regular campus program. They did not know if the Challenge Program was aligned with those objectives.
- Agreed that they understood the training materials, that they will use them at their schools, and that the students will definitely benefit.

Feedback from the Parks and Recreation Department on the “manipulatives” training session indicated that it will definitely benefit the After-School staff and their students.

h). Conclusions and Recommendations –

- Consider setting up a mechanism to improve coordination between the After-School Challenge staff and their middle school faculty relative to alignment of the after-school program with TEKS and their campus mathematics and science programs.

- Provide regular training sessions in mathematics and science for After-School Challenge staff. This type of training could possibly be integrated with mandatory Parks and Recreation Department in-service training.

3. Adult Literacy Center Training - Adults who return to literacy centers for additional learning in order to take the GED assessment typically are weak in the area of mathematics. This is the largest "gate-keeper" subject matter area and is critical to success in the assessment examination.

Providing professional development for staff in literacy centers near the city’s model elementary school campuses could assist in establishing partnerships to enhance the continuum of early childhood to adult learning.

a). Problem and Information Needs - ***How*** mathematics is taught within the centers is an important consideration in looking at more rigorous standards for adult literacy. It is important that learning center staff have the

tools to teach and assess rigorous mathematics and science in a variety of ways. Exposure of center staff to standards-based teaching of mathematics and science will enhance the ability of adults to successfully complete and pass standardized assessments.

b). Participants – The proposed mathematics and science training for Adult Literacy Center staff did not occur as planned. A scheduled workshop did not succeed in attracting participants. The lack of attendance may indicate that the program did not meet the needs of the Center. Another reason could be that it was not well advertised.

c). Objectives - The objectives in this area would have been to:

- Train Literacy Center staff in new and different ways to teach mathematics and science, to adults pursuing a GED, by using a standards-based approach.
- Familiarize Literacy Center staff in the use of manipulatives and assembled science kits for teaching mathematics and science.
- Provide the tools to allow Literacy Center staff to assess student success in mathematics and science learning.
- Encourage the development of partnerships of Literacy Centers with public school staffs in the delivery of professional development.

d). Activities - No activities were held. The proposed mathematics and science training workshop for Adult Literacy Center staff did not occur as planned and did not succeed in attracting participants.

e). Expected Outcomes - As a result of this training:

- Literacy Center staff would have understood the standards-based methods required to teach adults mathematics and science.
- They would have been able to provide the knowledge students need to pass the standardized assessment examination.
- They would have been able apply "hands on" learning and practice mathematics and science skills using standards-based manipulatives and technology.

f). Evaluation Method – Feedback from the Presenter.

g). Finding –The workshop was not held.

h). Conclusions and Recommendations :

- It is important to align Adult Education with the K-16 standards-based systemic reform in mathematics and science teaching and learning taking place in San Antonio. Appropriate staff training will facilitate the alignment. This would provide a continuity for those students planning to continue with college studies.
- UTSA/SAUSI/City/Literacy Center representatives should revisit the issue of staff training in rigorous standards-based mathematics and science teaching methods.

Attachment 1A

DAY CARE STAFF DEVELOPMENT WORKSHOP TEXTEAMS MATHEMATICS MATERIALS SURVEY DATA FROM THE NOV/DEC 2001 WORKSHOP SESSIONS	Percentage of Attendees Answering Statement as:				
STATEMENT/QUESTION n = 47	**STRONGLY DISAGREE**	**DISAGREE**	**SOMEWHAT AGREE**	**AGREE**	**STRONGLY AGREE**
1. I have a thorough understanding of the TEXTEAM materials.	2 0 -	0 3 -	17 7 -	53 49 -	28 41 -
2. I am successfully using TEXTEAM materials at my center	- 0 2	- 10 0	- 24 10	- 37 59	- 29 29
3.I need additional help to implement the new TEXTEAM materials.	- 19 15	- 24 44	- 24 17	- 24 15	- 9 9
4. At our center, we have specific activities to help preschoolers build mathematical and science knowledge.	4 13 2	6 8 14	24 28 19	40 33 36	20 18 29
5. At the center, I am having **more** conversations about mathematics and science with:					
a. My colleagues	11 4 0	6 8 13	19 13 31	55 55 40	9 20 26
b. Parents of the children	6 16 5	8 21 15	32 32 24	45 10 39	9 21 17
6. At my center, we have support from the local elementary school staff.	36 30 26	19 28 33	21 15 12	15 10 21	9 17 8
a. They provide materials and encouragement.	32 34 30	26 34 35	13 8 13	21 11 18	8 13 4
b. We meet with the elementary school staff regularly.	45 38 27	28 33 27	4 8 20	17 10 15	6 11 11
7. We have a computer at our center.	32 39 24	17 5 17	0 12 12	19 24 17	32 20 30
a. The children use the computer in their math and science learning.	43 51 41	15 20 24	11 10 7	13 7 9	18 12 19
b. I use the computer to get teaching aids from the WEB.	43 54 45	17 28 29	9 3 13	21 10 8	10 5 6
8. As a result of this training:					
a. I have changed the way I work with children.	- 0 0	- 7 0	- 10 22	- 63 45	- 20 33
b. I was able to apply what I learned.	- 0 0	- 3 0	- 5 15	- 59 45	- 33 40

Attachment 1B

DAY CARE STAFF DEVELOPMENT WORKSHOP TEXTEAMS MATHEMATICS MATERIALS SURVEY DATA FROM THE APRIL/MAY, 2002 WORKSHOP SESSIONS	Percentage of Attendees Answering Statement as:				
STATEMENT/QUESTION n = 16	**STRONGLY DISAGREE**	**DISAGREE**	**SOMEWHAT AGREE**	**AGREE**	**STRONGLY AGREE**
1.I have a thorough understanding of the TEXTEAM materials	0 0 -	0 0 -	6 14 -	47 43 -	47 43 -
2. I am successfully using TEXTEAM materials at my center	- 0 0	- 20 0	- 0 25	- 40 17	- 40 58
3.I need additional help to implement the new TEXTEAM materials.	- 6 0	- 20 33	- 20 42	- 27 8	- 27 17
4. At our center, we have specific activities to help preschoolers build mathematical and science knowledge.	0 0 9	6 7 8	44 33 33	25 27 25	25 33 25
5. At the center, I am having **more** conversations about mathematics and science with:					
a. My colleagues	12 8 8	6 0 8	19 31 17	50 23 25	13 38 42
b. Parents of the children	8 0 9	13 7 8	33 36 25	33 36 25	13 21 33
6. At my center, we have support from the local elementary school staff.	23 8 19	38 31 18	13 46 19	13 0 18	13 15 26
a. They provide materials and encouragement.	19 13 20	31 27 20	19 40 40	19 13 10	12 7 10
b. We meet with the elementary school staff regularly.	29 22 17	36 50 25	7 7 8	21 7 33	7 14 17
7. We have a computer at our center.	27 26 26	20 27 25	0 0 8	20 7 8	33 40 33
a. The children use the computer in their math and science learning.	27 40 46	20 20 18	0 13 0	20 7 18	33 20 18
b. I use the computer to get teaching aids from the WEB.	44 31 33	19 23 42	13 15 0	6 8 25	18 23 0
8. As a result of this training:					
a. I have changed the way I work with children.	0 0 0	0 0 0	7 7 9	40 64 58	53 29 33
b. I was able to apply what I learned.	0 0 0	0 0 0	12 15 9	25 39 36	63 46 55

Attachment 1C

Representative Comments
Regarding the 5 Day Mathematics Training Workshops

Participant #A1 - “They have made math more enjoyable and have shown us how to make it more enjoyable for the children.”

Participant #A14 - “I love your activities. I have implemented some in my centers and they are fun, inexpensive, and kids do learn.”

Participant #A15 - “I have added more challenging activities, and children have a great interest. I have saved a lot of the objects and materials since then, and the children themselves create their own.”

Participant #A35 – “ I would like to get a computer for my Pre-K Plus Class to build their knowledge in technology.”

Participant # B3 - " We apply math to everything - counting, measuring. Things I took for granted like counting and applied it to the way we learn here; totally encourages the children to count".

Participant # B4 - "We do more hands on activities and the children love working with a buddy or as a group".

Participant #B7 - "This workshop really applies to my place of employment. I can use all of the materials learned here. I really like the hands-on activities".

Participant #B16 - Great input, great ideas. We will take the great information and use it at my center".

Attachment 2A

DAY CARE STAFF DEVELOPMENT WORKSHOP FOSS SCIENCE MATERIALS SURVEY DATA MAY, 2002	Percentage of Attendees Answering Statement as:				
STATEMENT/QUESTION n=26	**STRONGLY DISAGREE**	**DISAGREE**	**SOMEWHAT AGREE**	**AGREE**	**STRONGLY AGREE**
1. I feel "lost" with the SCIENCE materials.	83	13	0	4	0
2. I have a thorough understanding of the SCIENCE materials.	4	0	12	38	46
3. I would be willing and able to use the SCIENCE materials at my center.	0	0	4	23	73
4. At my center, we have specific activities to help preschoolers build knowledge about science.	0	8	27	42	23
5. At my center, I have conversations about science with:					
a. My colleagues.	3	14	14	55	14
b. Parents of the children	0	13	17	48	22
6. At my center, we have support from the local elementary school staff.	4	16	24	36	20
a. They provide materials and encouragement regarding science.	16	29	25	17	13
b. We meet with the elementary school staff regularly about science.	26	26	26	13	9
7. We have a computer at our center.	23	19	4	19	35
a. The children use the computer in their science learning.	20	44	8	12	16
b. I use the computer to get teaching aids from the WEB.	22	39	9	17	13
8. As a result of time spent in the workshop: (Please give more detail in Item 10).					
a. I learned new ideas about how to teach science.	0	0	4	25	71
b. Gained new professional tools for science teaching.	0	0	4	28	68
c. Established a relationship for future professional cooperation.	0	0	8	32	60

Attachment 2B

Representative Comments
Regarding the 1 Day Science Training Workshop

Participant #1 - "I need to know the staff from the elementary school. I have not yet met them".

Participant #7 - "My pre-schoolers are going to love this. They already are very much interested in nature and bugs. This will enhance their five senses, teaching them to use them all at once".

Participant #11 - "I feel like there are lots of children who love bugs and fish. I'm glad there are activities to bring them into the classroom".

Participant #15 – “I learned a lot of science materials that could get my children interested in going to Discovery Centers”.

Participant #18 - "It was so much fun. My kids love to do hands on and science is my main focus for my class because our science center was really weak".

Participant #23 - "The science workshop was very useful because it actually taught and gave ideas that can be used in a pre-school environment".

Attachment 3A

AFTER SCHOOL CHALLENGE PROGRAM STAFF DEVELOPMENT WORKSHOP SURVEY DATA MAY, 2002	Percentage of Attendees Answering Statement as:				
STATEMENT/QUESTION n=5	**STRONGLY DISAGREE**	**DISAGREE**	**SOMEWHAT AGREE**	**AGREE**	**STRONGLY AGREE**
1. I feel "lost" with the Pentathlon materials.	60	20	20	0	0
2. I have a thorough understanding of the Pentathlon materials.	0	0	0	60	40
3. I would be willing and able to use the Pentathlon materials at my school.	0	0	0	40	60
4. Regarding the Texas Assessment of Academic Skills (TAAS):					
A. I know my campus TAAS objectives.	20	60	20	0	0
B. I can see the relationship of this training to my campus TAAS objectives.	80	0	20	0	0
C. I need to check the TAAS objectives at my campus.	0	0	100	0	0
5. The content of the Challenge Program is aligned with the regular mathematics curriculum at my campus.	40	0	20	40	0
6. At my campus, I meet with the mathematics and science staff regularly.	40	40	0	20	0
7. I frequently have conversations with parents about mathematics.	20	20	40	20	0
8. The time I spent in today's workshop was beneficial to me.	0	0	20	0	80
9. As a result of time spent in the workshop: (Please give more detail in Item 10).					
A. I learned new ideas.	0	0	20	0	80
B. I refined concepts that I already knew.	0	0	1	1	3
C. I gained new professional tools.	0	0	0	1	4
D. I established a relationship for future professional cooperation.	0	0	1	0	4

PARTICIPANT COMMENTS

Participant #1 - This will be a very good way for my students to refine their math skills and still have fun. I can see it being very beneficial in the classroom also.
Participant #2 - A very useful workshop. Presentation was done well and the hands-on was very beneficial. The students will enjoy the games.
Participant #3 - I learned things I didn't know.
Participant #4 - This was helpful but it could have been shortened.
Participant #5 - These games are very educational. I am sure the kids will love the games.